

## CITY OF FRANKLIN – WATER MANAGEMENT DEPARTMENT CROSS CONNECTION CONTROL PLAN

### PURPOSE

This plan describes the City of Franklin – Water Management Department’s program of action designed to inform the public of the danger of cross-connections, to identify possible cross-connections, to insure that cross-connection control devices are installed where needed, and to set forth a schedule of periodic testing of the installed control devices.

### INFORMING THE PUBLIC

Few members of the general public are aware of the potential public health danger from cross-connections. By informing the public of the potential health hazards from cross-connections, a greater degree of cooperation for this program should be gained. The following measures will be used to inform our customers about the need for cross-connection control:

1. Reminders with water bills at least once each year.
2. Posters at the (utility district) (water system) office displayed one month out of each quarter.
3. Furnish the local newspaper an example of a cross-connection contamination or pollution incident once each year.
4. Personal visits to commercial, industrial, institutional, and agricultural customers to explain the need for cross-connection control.
5. Contact made with developers to explain cross-connection control requirements as early as possible in the planning or construction stage.

The emphasis of all these measures will be that it is the customer’s responsibility to eliminate or control cross-connections. Failure to do so may result in termination of water service.

## IDENTIFYING CROSS-CONNECTIONS

The entire customer list will be reviewed in an effort to identify those customers who are likely to have cross-connections. As far as practical, such customers will be grouped in at least two risk categories (e.g., very high and high) according to the degree of probable risk. In general, those customers considered likely of being of the greatest potential threat to the water system will be visited first. Examples of very high risk customers would be: sewage treatment plants, hospitals, mortuaries, laboratories, pest exterminators, agricultural suppliers of bulk fertilizers, pesticides, herbicides, etc., manufacturers, chemical processors, dry cleaners, car washes, etc. Examples of some establishments that may be of somewhat lower risk would include such premises as: coin operated laundries, schools, water treatment plants, restaurants and other food establishments, dairies, etc.

**Scheduling Visits to Very High-Risk Customers.** When the list of customers with a very high degree of cross-connection risk has been put together, a schedule of on-site visits will be made. It is the goal of the City of Franklin – Water Management Department to complete visits to all customers identified as very high-risk no later than December 2003. Our plan is to complete no less than 20 on-site visits each week during the next 26 weeks in order to meet our goals.

**Visits to High Risk Customers.** When the very high risk customers have been visited, a schedule of visits to other high risk customers will be prepared. Our plan is to complete no less than 20 on-site visits each week during this phase of the program, with a goal of completing these visits no later than December 31 2003

The above goals for completing surveys and corrections were based on a preliminary evaluation of the customers served by the water system. Appendix A (attached) lists those establishments that could readily be identified as likely having cross-connections. These establishments are further grouped into categories according to suspected risk they may pose to the safety of the water system. These are preliminary listings and will be reviewed and modified as cross-connection control efforts progress. Others will likely be identified that will be added to the list of customers to receive either first or second priority.

**Visits to New Commercial, Industrial and Business Customers.** An effort will be made to identify new establishments while in the planning or early construction stages. The planned uses of water will be investigated. Cross-connection control devices will be specified at needed locations. It is the City of Franklin – Water Management Department's objective to have any needed backflow prevention devices installed during construction before water service is provided for new customers.

**A Continuing Program of Search for Cross-Connections.** Visits will continue to be made to any remaining commercial, industrial, or institutional customers as well as agricultural

customers where water is used directly in production or maintenance operations. In addition, residential customers who may create cross-connection hazards will be identified and visited. It is the goal of the City of Franklin – Water Management Department to revisit all premises where cross-connections have been corrected or where cross-connections are considered likely to be created at least annually following the initial visit.

**Field Visits Procedures.** During cross-connection visits, a field sheet will be completed showing details of significant findings. Information to be recorded on the field sheet will include: date of visit, customer's name, mailing address, telephone number, persons(s) contacted, description and locations of cross-connection problems, corrected action needed, etc.

Any cross-connection hazards found will be explained to the persons assisting in making the surveys. If there is any (1) uncertainty on the part of the individual making the survey as to what protective action should be taken or (2) the customer disagrees strongly as to the need for correction, the customer will be informed that the information obtained during the survey will be reviewed with the management of the water system and , if needed, with the system's consulting engineer or technical advisor. A written report containing any recommendations will be mailed to the customer as soon as possible.

**Action When a Cross-Connection is Identified.** When a cross-connection is found, the following action will be taken:

1. Whenever possible, take immediate action to eliminate or reduce the cross-connection hazard.
2. Inform the customer by letter within ten working days of findings and of required backflow control measures and a time limit for completing the corrective action.
  - a. Time limit may vary depending on difficulty of making correction up to a maximum of sixty days.
  - b. Customer will be asked to discuss with a representative of the water system any problems that may arise in meeting this time limit.
  - c. The customer will be supplied a list of acceptable backflow prevention devices and criteria to be followed in its installation and urged to ask for the water system's representative to visit the site to review details of the proposed installation immediately before starting the work.
3. The customer will also be informed in writing of the water system's willingness to assist in identifying and correcting any remaining internal cross-connection problems for the protection of the occupants of the premises.

## INSURING CROSS-CONNECTION CONTROL DEVICES ARE INSTALLED AND MAINTAINED

Inspection of Installed Backflow Prevention Devices. As soon as possible after the customer has installed a backflow prevention device(s), but no later than 10 days after the scheduled date for completion, the corrective measures will be inspected by a water system employee. The inspection will determine if the corrective measures have been installed correctly and any reduced pressure backflow prevention device, double check valve assembly will be tested to determine if it is operating correctly. Such backflow prevention devices will be tested by a qualified individual from the City of Franklin – Water Management Department, using approved test equipment and test procedures.

Action to be Taken After Inspection. If the control device is installed properly and if it functions properly, the customer will be given an “approved” tag. If the control device is not installed or if it does not function properly, the customer will be given 15 days to complete installation or make required changes in installation or repairs. After re-inspection at end of 15-day period, failure to have a properly functioning cross-connection device installed will result in removal of water meter and discontinuance of service. Service will only be started again by having a functioning control device installed and by paying a meter installation fee.

## PERIODIC TESTING OF CROSS-CONNECTION CONTROL DEVICES

Since all mechanical devices wear and deteriorate, periodic inspections are needed to insure that they are functioning properly. Each installed cross-connection control device will be inspected. All reduced pressure backflow prevention devices, double check valve assemblies will be tested:

1. Upon initial installation.
2. Whenever partially disassembled for cleaning and repairs.
3. Periodically as follows:
  - a. Reduced pressure backflow preventer – at least once every 12 months and more frequently for high risk situations.

- b. Double check valve assemblies – a minimum of every 12 months.
4. When protective unit is suspected of malfunctioning or needing repairs.

Test will be performed by a qualified water system employee or by another qualified individual holding a valid certificate, whose services will be secured by the water system as needed. Test procedures and equipment will conform to the provisions of the 7<sup>th</sup> Edition of the “Manual of Cross-Connection Control” published by the USC Foundation of Cross-Connection Control. Test reports of backflow prevention devices will be maintained as a part of the water system’s permanent records.

Where an air-gap separation, atmospheric vacuum breaker, dual check valve with atmospheric vent, etc. is being relied upon for protection from backflow, these devices will be inspected at least annually to determine that they have not been removed or altered so as to be ineffective, and that the device is in a good state of repair and is functioning properly. Attention will also be given to any change in water use patterns that might dictate the need for more positive protection.

#### PERSONNEL TO CARRY OUT PLAN

This plan is to be carried out by employees of the City of Franklin – Water Management Department. We intend to devote 20 employee-days of effort to carrying out the cross-connection control program each month of the year.

#### RECORDS

Records will be maintained to document the City of Franklin – Water Management Departments efforts to protect against backflow. A file will be maintained which will permit ready review of findings of on-site visits, corrections required, correspondence, tests records, etc., of the various premises visited. Data to be recorded for various on-site surveys will include such information as: name and/or address of premises, owner’s name and address, date of visit, person(s) contacted, cross-connections found, correction’s needed, and date by which corrective measures need to be taken. In addition, a computer file will be utilized in scheduling routine revisits to inspect and test pressure type backflow prevention devices and to inspect air-gap separations, atmospheric vacuum breakers, etc. The computer will contain essential information on the type of protection provided, date installed, manufacturer, model, size and serial number, where applicable, a brief summary of previous inspections and/or test, date of test, results, name of inspector/tester, etc.

APPROVED BY:\_\_\_\_\_ DATE:\_\_\_\_\_

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